

A CLINICAL FIELD TRIAL TO DETERMINE:

**Efficacy of Oxytetracycline-medicated Feed to Control Mortality
of Fingerling Coho Salmon (*Oncorhynchus kisutch*)
caused by Coldwater Disease - Study Number BOZ-99-OTF-03**

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Abstract

A clinical field trial was conducted at the Quilcene National Fish Hatchery (Quilcene, WA) to evaluate the efficacy of oxytetracycline-medicated feed (OTF) to control mortality of fingerling coho salmon *Oncorhynchus kisutch* caused by systemic coldwater disease (causative agent; *Flavobacterium psychrophilum*). Twelve test tanks, each holding approximately 7,000 fish, were used during the study. Fish in six of the test tanks were fed OTF at a dosage of 3.7 g oxytetracycline/100 lbs fish/d for 10 consecutive days. Fish in the other six test tanks were fed non-medicated feed throughout the study and thus served as untreated controls. The 10-d OTF feeding regimen was followed by a 14-d post-treatment observation period. Fish used in the study were diagnosed with coldwater disease based on growth of *F. psychrophilum* on Tryptone Yeast Extract (TYES) that had been streaked with kidney tissue from test fish, and from microscopic examination of bacteria of Diff-Quik stained kidney and fin imprinted (eroded fins only) slides. At the end of the combined treatment and post-treatment periods, percent mean cumulative mortality was significantly less ($P < 0.001$) in treated tanks (0.78%, 54 fish) than in untreated tanks (2.02%, 140 fish). Results from this study demonstrated that administering OTF at 3.7 g oxytetracycline/100 lbs fish/d for 10 consecutive days was efficacious in controlling mortality of fingerling coho salmon caused by systemic coldwater disease.